

REMARKS

Favorable reconsideration of this application in light of the following amendments and remarks is respectfully requested. No new matter has been added. Claims 1, 6, 16, 27, 35, and 42 have been amended. Claims 1, 6 and 16 have been amended to require that the blower has an impeller which rotates around an axis perpendicular to the surface. For support in the specification, see page 19, lines 7 and 8. Claims 1, 6, 16, 27 and 42 have been amended to require that the second port opens into an air path parallel to the surface. For support in the specification, see Figs. 4 and 5 and accompanying text. Furthermore, claim 27 has been amended to require that the blower is mounted directly to the surface. For support in the specification, see page 9, lines 1-3. Claim 35 has also been amended to delete the words "low profile."

Rejections under 35 U.S.C. §102(b)

Claims 1-4, 6-12 and 16-23 have been rejected under 35 U.S.C. §102(b) as being anticipated by Nelson, U.S. Pat. No. 5,912,802. Amended independent claim 1 defines a system for cooling electronic components that includes a blower coupled to a surface. The blower has a first port, a second port, and an impeller which rotates around an axis perpendicular to the surface. The blower is oriented such that such that air flowing through the first port flows through a channel formed by the blower and the surface, and such that the second port opens into an air path parallel to the surface.

In contrast, Nelson discloses a blower coupled to a surface with an impeller that rotates around an axis that is parallel to the surface. This is very different from amended claim 1, which requires that the blower have an impeller which rotates around an axis perpendicular to the surface. Thus, the claim reduces the height of the blower relative to the surface, whereas the height of the blower in Nelson, relative to the surface, is increased. A blower having an impeller that rotates around an axis that is perpendicular to the surface is neither taught nor suggested by Nelson.

Since Nelson does not teach every element of amended claim 1, claim 1 is not anticipated under 35 U.S.C. §102(b) by Nelson. Claims 2-4 depend from claim 1 and are allowable for the same reason as discussed above with regard to claim 1, and are further allowable in view of the additional limitations set forth therein. Amended independent

claims 6 and 16 also require an impeller which rotates around an axis that is perpendicular to the surface. Accordingly, for the same reasons as for amended claim 1, amended claim 6 and 16 are also not anticipated under 35 U.S.C. §102(b) by Nelson and are allowable. Dependent claims 7-12 and 17-23 depend on and incorporate independent claims 6 and 16, respectively, and are also allowable for the same reasons as discussed above with regard to amended claim 1, and are further allowable in view of the additional limitations set forth therein.

Claims 16-20 and 23 are rejected under 35 U.S.C. §102(b) as being anticipated by Lin, U.S. Pat. No. 6,125,924. Amended independent claim 16 defines a system for cooling electronic components that includes one or more electronic components coupled to a surface, the one or more electronic components including an integrated circuit in contact with a heat sink. A blower is directly mounted to the surface.

In contrast, Lin discloses an electronic component 31 coupled to a surface (no reference number), a base 21 made of heat conducting metal in contact with the electronic component 31, and a fan 22 (see Lin at Fig. 2 and accompanying text). However, the fan 22 in Lin is mounted directly to the base 21. This is very different from amended claim 16, which requires that the blower is directly mounted to the surface. A blower directly mounted to the surface is neither taught nor suggested by Lin.

Since Lin does not teach every element of amended claim 16, claim 16 is not anticipated under 35 U.S.C. §102(b) by Lin. Claims 17-20 and 23 depend from claim 1 and are allowable for the same reason as discussed above with regard to claim 1, and are further allowable in view of the additional limitations set forth therein.

Claims 1-4, 6-12, 16-23, 27-34 and 42-44 are rejected under 35 U.S.C. §102(b) as being anticipated by Konstad et al. (hereinafter Konstad), U.S. Pat. No. 6,130,820. Amended independent claim 1 defines a system for cooling electronic components that includes a blower coupled to a surface. The blower has a first port, a second port, and an impeller which rotates around an axis perpendicular to the surface. The blower is oriented such that the second port opens into an air path parallel to the surface.

In contrast, Konstad discloses, at Figs. 1 and 2, a fan 103 and a memory card 101 attached to motherboard 100. However, the blades of the fan 103 in Figs. 1 and 2 of Konstad rotate about an axis that is parallel to both the motherboard 100 and memory

card 101, unlike amended claim 1 which requires that the impeller of the blower rotates on an axis perpendicular to the surface. While Konstad discloses a fan 303 that rotates about an axis that is perpendicular to the motherboard 300 at Fig. 4, neither port of the fan 303 opens into an air path parallel to the surface, as required by claim 1, as amended. A blower having an impeller that rotates around an axis that is perpendicular to the surface, the blower oriented such that the second port opens into an air path parallel to the surface, is neither taught nor suggested by Konstad.

Since Konstad does not teach every element of amended claim 1, claim 1 is not anticipated under 35 U.S.C. §102(b) by Konstad. Claims 2-4 depend from claim 1 and are allowable for the same reason as discussed above with regard to claim 1, and are further allowable in view of the additional limitations set forth therein. Amended independent claims 6, 16, 27 and 42 also require a blower having an impeller which rotates around an axis perpendicular to the surface, the blower oriented such that the second port opens into an air path parallel to the surface. Accordingly, for the same reasons as amended claim 1, amended claims 6, 16, 27 and 42 are not anticipated under 35 U.S.C. §102(b) by Konstad and are allowable. Claims 7-12, 17-23, 28-34, 43 and 44 depend on and incorporate independent claims 6, 16, 27 and 42 respectively, and are also allowable for the same reasons as discussed above with regard to amended claim 1, and are further allowable in view of the additional limitations set forth therein.

Rejection under 35 U.S.C. §103(a)

Claims 5, 13, 24 and 35 stand rejected under 35 U.S.C. §103(a) over Konstad. As stated above, Konstad fails to teach or suggest a blower having an impeller that rotates around an axis that is perpendicular to the surface, the blower oriented such that the second port opens into an air path parallel to the surface, as required by claim 5, 13, 24 and 35. Accordingly, claims 5, 13, 24 and 35 are nonobvious over Konstad.

Double Patenting Rejections

Claims 1-9 and 13 are rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-4, 11, 13 and 14 in U.S. Patent No.

6,438,984. Additionally, claims 1-13, 16-24, 27-35 and 42-44 are rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-4, 9, 11-13, 15, 17-20, 25, 26, 28 and 29 of U.S. Patent No. 6,587,343. To address this rejection, Applicants herewith provide terminal disclaimers with regard to U.S. Patent No. 6,438,984, and U.S. Patent No. 6,587,343.

In addition, Applicants enclose herewith the fee required under 37 CFR 1.20(d) for the present terminal disclaimers.

Rejection under 35 U.S.C. §112

Claim 35 has been rejected under 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the office action suggests that the term "low" in claim 35 is not defined by the claim or specification. Accordingly, claim 35 has been amended to delete the words "low profile."

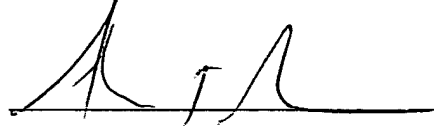
Specification

The specification has been objected to because the term "IU enclosure" is not understood. Applicants note that the specification, on page 1, line 24, page 11, line 9, and elsewhere, refers to the term "IU enclosure," and not "IU enclosure." To one of ordinary skill in the art of electronics, and more particularly, electronic enclosures, the term "IU" refers to a form factor of 1.75 inches in height. This is consistent with the subject specification which states, for example, at page 11, lines 9-10, that the "height of system 31 may be , but is not limited to, less than 1.75", allowing it to fit into a IU enclosure."

Applicant believes that no extension of time is required; however, this conditional petition is being made to provide for the possibility that the applicant has inadvertently overlooked the need for an extension of time. If any additional fees are required for the timely consideration of this application, please charge deposit account number 19-4972.

It is believed that the application is in condition for allowance. Consideration of the application and issuance of a notice of allowance are respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'A. J. Smolenski, Jr.', is written over a horizontal line.

Alexander J. Smolenski, Jr.
Registration No. 47,953

BROMBERG & SUNSTEIN LLP
125 Summer Street
Boston, MA 02110-1618
Tel: 617 443-9292
Fax: 617 443-0004

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